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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/891,032

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Stephen D. Hanna

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01/20/2004

EXAMINER

SORRELL, ERON J

Brian C. Kunzler  
10 West 100 South  
Salt Lake City, UT 84101

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 01/20/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/891,032

Applicant(s)

HANNA ET AL.

Examiner

Eron J Sorrell

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

*Fritz M. Fleming*  
FRITZ FLEMING  
PRIMARY EXAMINER  
GROUP 2100

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 14-19, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Terashima et al. (U.S. Patent No. 6,538,762 hereinafter Terashima).

3. Referring to method claim 1 and system claim 14, Terashima teaches a method for transmitting a plurality of data types over a plurality of transmission paths, comprising:

storing data of a plurality of compressed and non-compressed data types (see 51-57 of column 5 and lines 33-38 of column 8; Note the "control circuit commands" described in lines 51-57 are non-compressed data);

receiving requests for the stored data (see lines 66-67 of column 8 and lines 1-2 of column 9);

transmitting data of both the compressed and non-compressed data types over each of a plurality of transmission paths (see lines 41-50 of column 5);

processing the transmitted data in accordance with the type of transmitted data after the transmission of the data (see lines 51-57 of column 5).

4. Referring to method claim 2 and system claim 15, Terashima discloses the storing of the compressed data further comprises placing the data in a plurality of FIFO buffers (see lines 51-57 of column 5).

5. Referring to claim 3, Terashima discloses further requesting the stored data by introducing an identification pattern into a transmission request, the identification pattern associated with the data type being transmitted at the same time as the data being transmitted (see lines 1-41 of column 5; Note the "command codes" are interpreted as the identification pattern).

6. Referring to claim 4, Terashima discloses transmitting data both of the compressed and non-compressed data types further comprises transmitting the data identification pattern

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associated with the data type being transmitted at the same time as the data being transmitted (see lines 42-57 of column 5).

7. Referring to claim 16, Terashima discloses the handshaking control module is further configured to receive data from a host and place the received data into the memory module (see lines 42-57 of column 5).

8. Referring to claim 17, Terashima discloses the handshaking module is configured to place the data received into one of the plurality of FIFO buffers depending on the type of data received (see lines 42-57 of column 5).

9. Referring to claim 18, Terashima discloses the handshaking control module is configured to receive requests for print data from the data processing module (see figure 3; Note item labeled 5 corresponds to the handshaking module).

10. Referring to claim 19, Terashima discloses the handshaking control module is configured to place the data requested from the data processing module on the data bus appropriate for the data type requested (see items labeled 59 and 61 in figure 5).

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11. Referring to claim 23, Terashima discloses the data processing module is configured to evaluate header information relating to the print job to determine what types of data to request from the handshaking control module (see lines 1-41 of column 5).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 5-7 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima in view of Notredame et al.

(U.S. Patent No. 6,049,390 hereinafter Notredame).

14. Referring to claims 5-7, Terashima fails to disclose the transmitting data of both the compressed and non-compressed data types further comprises transmitting Linework (LW) data, Linework control (LWC) data, and continuous tone (CT) data over any one of a plurality of transmission paths, however Terashima

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does disclose using image conversion parameters for correctly converting raster images (see lines 54-60 of column 2).

Notredame discloses raster images compression schemes comprising LW data LWC data, and CT data (see lines 62-67 of column 2 and lines 1-20 of column 3).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Terashima such that the transmitting of the compressed and non-compressed data types further comprises transmitting Linework (LW) data, Linework control (LWC) data, and continuous tone (CT) data over any one of a plurality of transmission paths. Notredame suggests using these schemes results in a more efficient use of bandwidth (see lines 62-64 of column 2).

15. Referring to claim 20, Terashima fails to disclose the handshaking control module being configured to place continuous tone (CT) data upon a dedicated CT bus.

Notredame discloses that continuous tone data is totally different from Linework data as well as the compression schemes (see lines 62-67 of column 2 and lines 1-19 of column 3);

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Terashima with the teachings of Notredame such that CT

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data is placed on a dedicated CT bus because the data are completely different and require different spatial frequencies as taught by Notredame (see lines 11-19 of column 3).

16. Referring to claims 21 and 22, Terashima fails to disclose that the LW or LWC data is placed on the least busy of the buses used for LW or LWC data.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Terashima such that the LW or LWC data is placed on the least busy of the buses used for LW or LWC data because this would speed up print processing and Terashima suggests that the optimum methods should be used to for printing purposes (see lines 54-60 of column 2).

17. Claims 8,9,24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima in view of Har et al. (U.S. Patent No. 6,310,563 hereinafter Har).

18. Referring to method claim 8 and system claim 24, Terashima fails to disclose the method further comprising reading a word of the data in to a data decompression module every one half-clock cycle.



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In an analogous method, Har teaches reading a word of the data into a data decompression module every one-half clock cycle (see lines 41-62 of column 11).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Terashima such that it comprises reading a word of the data into a data decompression module every one half-clock cycle. One of ordinary skill in the art would have been motivated to make such modification in order to reduce potential bottlenecks in the system as suggested by Har (see lines 41-62 of column 11).

19. Referring to method claim 9 and system claim 25, Har teaches multiplexing the different types of data and processing each type of data received in accordance with the type (see item labeled 180 figure 1).

20. Claims 10-13 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima in view of Har and further in view of Notrdame.

21. Referring to method claims 10 and 11 and system 26 and 27, Terashima and Har fail to disclose lossless decompressing the

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data when the data received is Linework (LW) data or Linework control (LWC) data.

In an analogous method Notredame teaches losslessly decompressing the data when the data received is Linework (LW) data or Linework control (LWC) data (see lines 10-19 of column 3).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Terashima and Har such that it comprises losslessly decompressing the data when the data received is Linework (LW) data or Linework control (LWC) data in order to reproduce the compressed document without decreasing the print quality.

22. Referring to method claim 12 and system claim 28, Terashima discloses decompressing any compressed data when it is received (see lines 33-38 of column 8).

23. Referring to claim 13, the limitations set forth in this claim are the same limitations of claims 1-12, thus claim 13 is rejected under the same grounds as the rejections of claims 1-12.

***Response to Arguments***

24. Applicant's arguments filed 11/4/03 have been fully considered but they are not persuasive. The applicant argues:

1) Terashima does not teach transmitting data of both the compressed and non-compressed data types over each a plurality of transmission paths (see sentence bridging pages 2 and 3 of applicant's remarks filed 11/4/03); and

2) Terashima does not teach or disclose multiple simultaneous transmissions of varying data types (see last sentence of second full paragraph of page 3 of applicant's remarks filed 11/7/03).

**As per argument 1**, the Examiner disagrees. Firstly, the applicant concedes Terashima teaches the transmission of non-compressed command data at lines 4-5 of the first full paragraph of page 3 of applicant's remarks filed. Secondly, Terashima discloses compressed data is transmitted along path 61 to the compressed data decompression section 37 (see figure 1 and lines 33-38 of column 8). Finally, since the non-compressed command data is transmitted on path 59 (see lines 1-10 of column 8) and the compressed data is sent on path 61 (see lines 33-38 of column 8), Terashima clearly teaches transmitting data of both

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the compressed and non-compressed data types over each a plurality of transmission paths.

**As per argument 2**, the Examiner disagrees. At lines 42 to 50 of column 5, Terashima discloses command code (a first type of data) and a parameter are sent to a command analysis section 35 by way of a command path 55. Terashima discloses the actual data (a second type of data) is ***simultaneously sent*** to the command analysis section by way of data path 57 (emphasis added). Clearly at lines 42 to 50 of column 5 Terashima discloses multiple simultaneous transmissions of varying data types.

#### **Conclusion**

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J Sorrell whose telephone number is 703 305-7800. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A Gaffin can be reached on 703 308-3301. The fax phone numbers for the organization where this application or proceeding is assigned are 703 746-7239 for regular communications and 703 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

EJS  
January 15, 2004

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